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26. (newly presented) The fiber of claim 25 in which the fiber has:

a denier value in the range of 40 to 4,000;

a tensile strength higher than 0.5 grams per denier; and

a break elongation of at least 400%;

the fiber requiring a stress to elongate selected from the group consisting of 0.03 to 0.4 grams per denier to develop an elongation of 200% and 0.07 to 0.6 grams per denier to develop an elongation of 300%.

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27. (newly presented) The fiber of claim 26 in which the fiber has a core of a segmented polymer; the segmented polymer has soft segments and hard segments; the hard segments are selected from the group consisting of urethane, amide, imide, and mixtures thereof; and the hard segments are linked to the soft segments by covalent bonds.

28. (newly presented) The fiber of claim 27 in which the water soluble fluoride is selected from the group consisting of sodium fluoride and stannous fluoride.

29. (newly presented) The fiber of claim 28 in which the hard segments are urethane.

REMARKS

Amendments

In order to more particularly point out and distinctly claim the subject matter that applicants regard as the invention, claims 1-10 and 23-34 have been amended to recite "a fiber" rather than "an imbibed fiber".

Claims 23 and 24 have been amended to recite "a fiber" instead of "a polymer". Support for this amendment is found in Example 3.

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Support for newly presented claim 25 is found in original claims 13 and 15. Support for newly presented claim 26 is found in original claim 4. Support for newly presented claim 27 is found in original claim 5. Support for newly presented claim 28 is found in original claim 7. Support for newly presented claim 29 is found on page 4, lines 5-7.

It is submitted that no new matter is introduced by these amendments and newly presented claims.

Rejection under 35 U.S.C. § 112 ¶ 2

Claims 1-13 and 23-24 were rejected under 35 U.S.C. § 112 ¶ 2. It particular is was asserted that recitation of "an imbibed fiber" in the preamble of the claims was indefinite. The claims have been amended to recite "a fiber" rather than an "an imbibed fiber." It is submitted that this ground for rejection has been overcome.

The Office asks "when the fiber is already imbibed with the agent, is it still capable of imbibing more agent?" The claims recite "a therapeutically effective amount of the chemotherapeutic agent." Applicants submit that the language of the claims is readily understandable by those skilled in the art and thus satisfies the requirements of 35 U.S.C. 112 ¶ 2.

First Rejection under 35 U.S.C. § 102(b)

Claims 1 and 23 were rejected under 35 U.S.C. § 102(b) as anticipated by Sablotsky, U.S. Patent 5,300,291 ("Sablotsky"). Sablotsky discloses a dermal composition comprising a drug, a pressure sensitive adhesive, an adhesiveness increasing amount of a clay, and a solvent. Abstract. The composition is used as a transdermal drug delivery device that delivers drugs over a prolonged period of time. Abstract and column 3, lines 22-27.

The Office asserts that Sablotsky "discloses a rubber elastomeric polymer with penicillin incorporated therein (C7, L26-28; C9, L1-5)." Page 3, lines 9-10.

Claim 1 recites "a fiber of an elastomeric polymer." Claim 23, as amended, recites "a fiber." Sablotsky does not disclose a fiber. Sablotsky's device is a "shaped pressure sensitive adhesive" achieved by conventional techniques such as "casting or cutting." Abstract and column 7, lines 9-13. If pressure sensitive adhesive were formed into a fiber and wound on a spindle, the person of ordinary skill in the art would expect the fiber to stick to itself and to the spindle. Thus, rejection of claims 1 and 23 anticipated by Sablotsky should be withdrawn.

Further, Sablotsky does not suggest applicants' invention to one of ordinary skill in the art. Sablotsky teaches that the "composition of this invention possesses sufficient adhesive properties to remain in place for days with low incidence of debonding." Column 7, lines 3-5. A composition that was sufficiently adhesive "to remain in place for days" would not be useful as a dental floss; it would adhere to itself as well as to the fingers and teeth of the user. Further, as noted above, the compositions of Sablotsky are designed to release a drug over a prolonged period of time. In contrast, applicants' dental floss must release the chemotherapeutic agent during the time the user is using the dental floss. Thus, the person of ordinary skill in the art would not use the teachings of Sablotsky to develop applicants' invention.

Second Rejection under 35 U.S.C. § 102(b)

Claims 1, and 23-24 were rejected under 35 U.S.C. § 102(b) as anticipated by Hill, U.S. Patent 5,098,711 ("Hill '711 or Hill"). This rejection is respectfully traversed.

Hill '711 discloses a method of treating the oral cavity with a preparation released from dental floss. Abstract.

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In Hill's method, the preparations are loaded in interstitial spaces between the fibers of a multi-strand floss. With respect to the location of the preparations in the dental floss, Hill states:

A review of the construction of the preferred floss used in the method of the present invention shows that the compositions employed are contained essentially in the interstitial spaces between the fibers of the floss with minimum composition on the outer surface of the floss.

Column 13, lines 58-62 (emphasis added).

Hill also states:

The unique construction of the floss and loading of cleaners, active ingredients and conditioners in the space around each of the nylon fibers allows loading of these substances from 10 to over 100% by weight of the floss.

Column 6, lines 17-21 (emphasis added).

In the invention recited in claims 1, 23, and 24, the chemotherapeutic agent is imbibed in the fiber. Hill does not disclose a dental floss in which a chemotherapeutic agent is imbibed in the fiber. As discussed above, in Hill the preparations are loaded in interstitial spaces between the fibers of a multi-strand floss. Therefore, rejection of claims 1, 23, and 24 as anticipated by Hill '711 is improper and should be withdrawn.

Rejection under 35 U.S.C. § 103(a)

Claim 1-24 were rejected under 35 U.S.C. § 103(a) as unpatentable over Burch, U.S. Patent 5,433,226 ("Burch"), in view of Hill '711. This rejection is respectfully traversed.

Burch discloses a dental floss comprising a fiber having a core of a segmented polymer. Abstract. The Office admits that Burch does not disclose impregnating these dental floss fibers with chemotherapeutic agents. Page 4, lines 8-9.

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The Office asserts that Hill '711 discloses a nylon dental floss with chemotherapeutic agents impregnated within the dental floss. Page 4, lines 10-12. If the Office is asserting that Hill teaches a dental floss in which chemotherapeutic agents are imbibed into the fibers of the dental floss, this assertion is respectfully traversed. As discussed above, Hill discloses dental floss in which the preparations are loaded in interstitial spaces between the fibers of a multi-strand floss. Thus, although the preparations may be "within the dental floss," they are not imbibed into the fibers of the dental floss.

Further, Hill states that it is critical that loading be accomplished in the interstitial spaces of the floss as distinguished from coating the dental floss. Column 19, line 39, to column 20, line 1. This teaches that the material should be outside the fibers of the dental floss and, thus, teaches away from imbibing a chemotherapeutic agent into the polymer.

Neither Burch nor Hill '711 disclose a fiber in which a chemotherapeutic agent is imbibed into the fiber. Thus, the combination of Burch and Hill '711 in the manner indicated by the Office does not produce applicants' invention. Rejection of claims 1-24 as unpatentable over Burch in view of Hill '711 is improper and should be withdrawn.

Conclusion

It is respectfully submitted that the claims are in condition for immediate allowance and a notice to this effect is earnestly solicited. The Examiner is invited to phone applicants' attorney if it is believed that a telephonic or personal interview would expedite prosecution of the application.

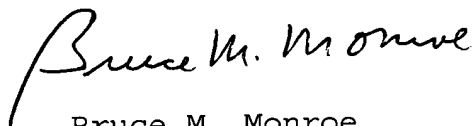
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applicants' attorney if it is believed that a telephonic or personal interview would expedite prosecution of the application.

Extension of Time

A check for a one-month extension of time accompanies this response. Pursuant to 37 C.F.R. § 1.136(a)(3), the Commissioner is requested to treat this Authorization as a constructive Petition for an Extension of Time. A separate Petition for an Extension of Time has not been enclosed.

Respectfully submitted,



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